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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/661,883	09/14/2000	Charles E. Schinner	10001935-1	9721

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EXAMINER	
JERABEK, KELLY L	
ART UNIT	**PAPER NUMBER**
2612	2

DATE MAILED: 02/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/661,883	SCHINNER ET AL.	
	Examiner	Art Unit	
	Kelly L. Jerabek	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 September 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: The serial number and date areas of the related applications section must be completed.

Appropriate correction is required.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Figure 1 does not include 33. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-12, and 14 rejected under 35 U.S.C. 102(e) as being anticipated by Hata US 6,603,508.

Re claim 1, Hata discloses in figure 1 a digital camera including an image capture device (103) for converting light to an electrical signal (col. 3, lines 40-47). The camera includes an automatic exposure control operation for each mode that the camera operates in (col. 5, lines 65-67; col. 6, lines 1-5). Each mode has an exposure value diagram having a range of exposure times (figs. 4,5,6). In addition, the camera includes a programmable amplifier (105) for automatically adjusting the strength of the electrical signal (col. 3, lines 48-62). The programmable amplifier (105) is adjusted when it is determined that the image is obfuscated to lack discernible features in order to display an image with optimum brightness (col. 6, lines 62-67).

Re claim 2, the programmable amplifier (105) also adjusts the strength of the electrical signal when the buffered image is blurred (col. 8, lines 1-7).

Re claim 3, the digital camera disclosed by Hata includes an image pre-processor (107) for further increasing the strength of the electrical signal (col. 5, lines 1-13). The camera is capable of displaying an image in the display panel (122) in a "live view" mode (col. 6, lines 44-47).

Re claim 4, the digital camera includes an analog to digital converter (106), and a digital gain control module (1075) that serves as a digital multiplier for increasing the strength of the digital signal (col. 5, lines 1-6).

Re claim 5, the digital gain control module (1075) adjusts the digital signal level of the R, G, and B data, therefore the digital multiplier means is a digital multiplier (col. 5, lines 4-6),

Re claim 6, CPU (121) is a microprocessor that sets the gain applied to the digital gain control module (1075), therefore the digital multiplier means is also a microprocessor (col. 5, lines 4-6).

Re claim 7, see claim 1.

Re claim 8, when the blur avoiding photographing mode of the digital camera is selected the gain of the programmable amplifier (105) is increased in incremental step values (col. 9, lines 17-26).

Re claim 9, the CPU (121) automatically increases the gain of the programmable amplifier (105) until the amplitude of the signals representing the image is increased to a predetermined level for an optimum exposure, thus increasing the gain stops when the strength of the signal reaches the predetermined level (col. 10, lines 1-7).

Re claim 10, the predetermined level for optimum exposure can be set according to the quality desired by the user, therefore a Gmax level can be set corresponding to the selected gain (col. 10, lines 41-50).

Re claim 11, when the inverse-triangle button is pressed the gain level may be lowered, therefore the strength may be decreased in incremental step values to a minimum strength value if a lower gain level is selected (col. 9, lines 24-26). As shown in figure 3, the gain drops below 0 when the control voltage drops below 0.25 V.

Re claim 12, the predetermined level for optimum exposure can be set according to the quality desired by the user, therefore a Gmin level can be set corresponding to the selected gain (col. 10, lines 41-50). As shown in figure 3, the gain drops below 0 when the control voltage drops below 0.25 V.

Re claim 14, the CPU (121) controls a photographing operation, an automatic exposure control operation, an automatic white balancing operation, and an automatic focusing operation in accordance with a series of program codes (col. 4, lines 13-26). In doing this, the CPU (121) calculates the gain needed by the programmable amplifier (105) (col. 3, lines 48-62). These actions are performed in order to produce a live view image with optimum brightness under low lighting conditions (col. 6, lines 59-67).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Hata in view of Fellegara et al. US 2001/0015760.

Hata discloses all of the limitations of claim 7. However, Hata does not state that the buffered image is repeatedly refreshed at a given frame rate independently of LCD brightness and contrast controls.

Fellegara discloses a digital camera with quick review of last captured image (fig. 6). The main display screen unit (36) of the camera is continuously refreshed by frame rate signals provided by the ASIC (122) and the microcontroller (page 5, paragraph 44). Fellegara makes no mention of LCD brightness or contrast controls being associated with the frame rate, thus this refreshment is independent of the LCD brightness and contrast controls. Therefore, it would have been obvious to include the ASIC (122) and microcontroller as disclosed by Fellegara in the digital camera disclosed by Hata. Doing

so would provide a means for repeatedly refreshing the buffered image at a given frame rate independently of the LCD brightness and contrast controls.

Claim 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Hata in view of Parulski et al. US 5,610,654.

Hata discloses all of the limitations of claim 1. In addition, Hata discloses that a CPU (121) controls a photographing operation, an automatic exposure control operation, an automatic white balancing operation, and an automatic focusing operation in accordance with a series of program codes (col. 4, lines 13-26). In doing this, the CPU (121) calculates the gain needed by the programmable amplifier (105) (col. 3, lines 48-62). These actions are performed in order to produce a live view image with optimum brightness under low lighting conditions (col. 6, lines 59-67). However, Hata does not state that the CPU (121) uses a stored look up table to determine the gain needed by the programmable amplifier (105).

Parulski discloses a digital camera including a programmable amplifier (16). A microprocessor (28) sets the gain of the programmable amplifier (16) based on the light level reading and the lens focal length setting using a look up table (col. 2, lines 40-46). Using a look up table to set the gain of a programmable amplifier is advantageous because look up tables contain a variety of information that affect the desired gain of the amplifier such as luminance, ISO speed, and exposure time. Therefore, it would have

been obvious to include the look up tables (1,2, and 3) as disclosed by Parulski in the digital camera disclosed by Hata. Doing so would provide a means for calculating the gain needed by the programmable amplifier to produce a live view image at a constant frame rate under low lighting conditions.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kelly Jerabek whose telephone number is (703) 305-8659. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached at (703)-305-4929.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

The fax number for submitting all Official communications is (703) 872-9306.

The fax number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at (703) 746-3059.

KLJ

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